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FAIRCHILD SEMICONDUCTOR®

Jameco Part Number 77083 (1N5402)

1N5400 - 1N5408

Features

- 3.0 ampere operation at T_A = 75°C with no thermal runaway.
- High current capability.
- Low leakage.

DO-201AD
COLOR BAND DENOTES CATHODE

General Purpose Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value									Units
		5400	5401	5402	5403	5404	5405	5406	5407	5408	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	300	400	500	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, .375 " lead length @ T_A = 75°C	3.0									A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	200									A
T_{stg}	Storage Temperature Range	-55 to +150									°C
T_J	Operating Junction Temperature	-55 to +150									°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	6.25	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	20	°C/W

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Device									Units
		5400	5401	5402	5403	5404	5405	5406	5407	5408	
V_F	Forward Voltage @ 3.0 A	1.2									V
I_{rr}	Maximum Full Load Reverse Current, Full Cycle T_A = 105°C	0.5									mA
I_R	Reverse Current @ rated V_R T_A = 25°C T_A = 100°C	5.0 500									µA µA
C_T	Toatal Capacitance V_R = 4.0 V, f = 1.0 MHz	30									pF

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Typical Characteristics

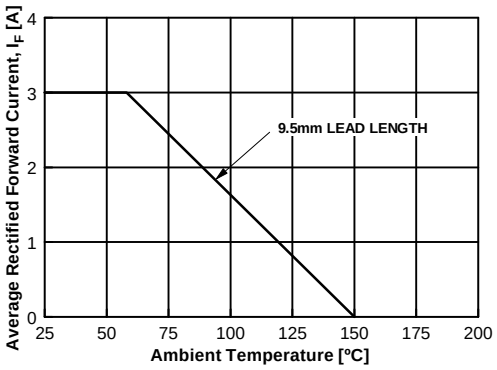

Figure 1. Forward Current Derating Curve

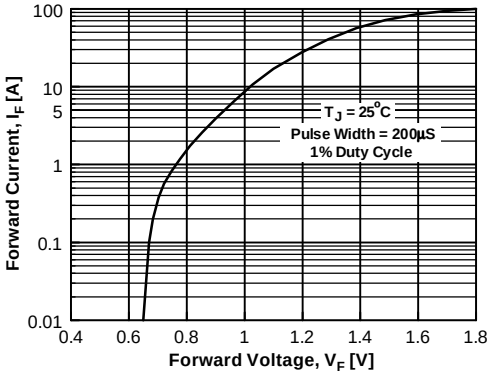

Figure 2. Forward Voltage Characteristics

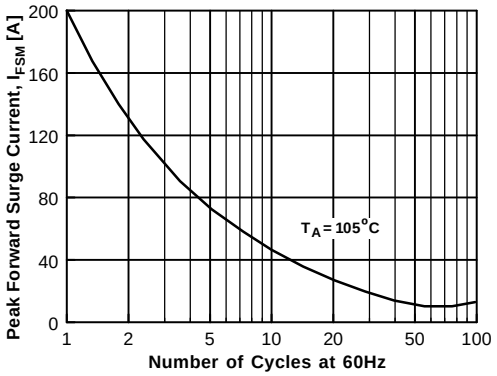

Figure 3. Non-Repetitive Surge Current

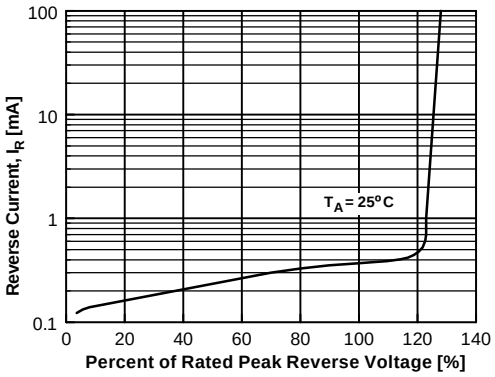

Figure 4. Reverse Current vs Reverse Voltage

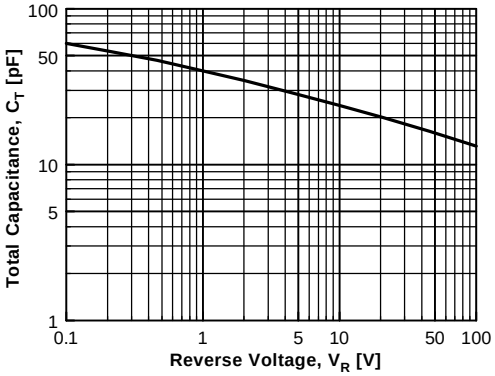

Figure 5. Total Capacitance

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DenseTrench™	GTO™	Power247™	SuperSOT™-6	
DOME™	HiSeC™	PowerTrench®	SuperSOT™-8	
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E^2CMOS™	LittleFET™	QS™	TinyLogic™	
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